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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,882	04/15/2002	Yan Yonghong	42390.P8351	8063

7590 01/12/2009  
Blakely Sokoloff Taylor & Zafman  
12400 Wilshire Boulevard  
Los Angeles, CA 90025

EXAMINER
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WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
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2626

MAIL DATE	DELIVERY MODE
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01/12/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/019,882	<b>Applicant(s)</b> YONGHONG, YAN	
	<b>Examiner</b> JAMES S. WOZNAK	<b>Art Unit</b> 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-4,6,7,9-12,14,15,17-19,21,22,24-27 and 29-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-19,21,22,24-27,29,30,34,36 and 37 is/are allowed.
- 6) ☒ Claim(s) 2-4,6,7,9-12,14,15 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. In response to the Office Action from 9/26/2008, the applicant has submitted an Amendment After Final (*which has been entered by the examiner*), filed 12/15/2008, cancelling the independent claims not indicated as being allowable in the previous Office Action, while adding new claims 31-37 that further limit allowable claims (*with the exception of claims 1 and 23, which have been cancelled with the present amendment*). As such, the applicant has alleged that since the only pending claims contain allowable subject matter, the application is in condition for allowance (*Amendment, Page 13*). While the examiner agrees that claims 17-19, 21-22, 24-27, 29-30, 34, and 36-37 are in condition for allowance, the remaining claims are directed to non-statutory subject matter under the most currently provided 35 U.S.C. 101 guidance. These claims do contain the same allowable subject matter as the aforementioned claims, however, so they would be in condition for allowance if amended to overcome the proceeding 35 U.S.C. 101 rejections. As a result of these new grounds of rejection, finality of the previous Office Action has been withdrawn.

### ***Claim Objections***

2. **Claims 32-33 and 35** are objected to because of the following informalities:

In claim 32 “herein” should be changed to –wherein--.

Claims 33 and 35 are listed as being respectively dependent upon cancelled claims 1 and 23. It is believed that these claims should instead be dependent upon claims 12 and 21 respectively. Thus, an amendment to this effect is suggested. Since it will be assumed that claim 33 depends upon claim 12, it will also be included in the proceeding 35 U.S.C. 101 rejection.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 2-4, 6-7, 9-12, 14-15, and 31-33** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

**Claim(s) 4, 6, 12, and 14** and their associated dependent claims is/are rejected under 35 USC 101 as not falling within one of the four statutory categories of invention. While the claim(s) recite a series of steps or acts to be performed, a statutory "process" under 35 USC 101 must (1) be tied to another statutory category (such as a manufacture or a machine), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claim(s) neither transform underlying subject matter (*i.e., there is no physical transformation that takes place in the claims, only a data-domain manipulation of abstract model value*) nor positively recite structure associated with another statutory category (*i.e., the algorithmic steps recited do not reference that they are performed by any type of physical hardware*), and therefore do not define a statutory process.

*Allowable Subject Matter*

5. **Claims 17-19, 21-22, 24-27, 29-30, 34, and 36-37** are allowable over the prior art of record.

6. The following is an examiner's statement of reasons for allowance:

With respect to **Claims 19 and 27**, the prior art of record fails to explicitly teach or fairly suggest a computer readable medium storing a program executed by a computer for speaker adaptation that utilizes estimated weights based on misrecognized speech utterances as respectively recited in claims 19 and 27, wherein the estimated weights are calculated by computing an average likelihood difference per frame and then computing a weight value by averaging the average likelihood difference over error words (*Specification, Page 6*).

Although Barnard et al (*U.S. Patent: 7,216,079*) discloses that it is well known in the prior art to mark and weight misrecognized utterance sections for speaker training (*Col. 3, Line 64- Col. 4, Line 11; Col. 5, Lines 16-26; Col. 6, Lines 21-39; and Col. 9, Lines 47-67; and Fig. 3*) and Junqua (*U.S. Patent: 6,253,181*) teaches an equation for calculating an average likelihood difference, as applied to claim 13, Junqua (*U.S. Patent: 6,253,181*) does not teach averaging the average likelihood difference over all error words to determine a weight for speaker adaptation of a speech recognition model. Thus, claims 19 and 27 are allowable over the prior art of record. The dependent claims associated with claims 19 and 27 further limit claims containing allowable subject matter, and thus, are also allowable over the prior art of record.

With respect to **Claims 21 and 29**, the prior art of record fails to explicitly teach or fairly suggest a computer readable medium storing a program executed by a computer for speaker adaptation that utilizes estimated weights based on misrecognized speech utterances, wherein the estimated weights are calculated by multiplying an average likelihood difference per frame calculated using the equation recited in claims 21 and 29 by the inverse of a number of misrecognized words for a particular speaker as per the equation also recited in these claims.

Although Barnard et al (*U.S. Patent: 7,216,079*) discloses that it is well known in the prior art to mark and weight misrecognized utterance sections for speaker training (*Col. 3, Line 64- Col. 4, Line 11; Col. 5, Lines 16-26; Col. 6, Lines 21-39; and Col. 9, Lines 47-67; and Fig. 3*) and Junqua (*U.S. Patent: 6,253,181*) teaches an equation for calculating an average likelihood difference, Junqua does not teach multiplying the calculated average likelihood by the inverse of a number of misrecognized words for a particular speaker as per the equation recited in claims 21 and 29. The dependent claims associated with claims 21 and 29 further limit claims containing allowable subject matter, and thus, are also allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. **Claims 2-4, 6-7, 9-12, 14-15, and 31-33** are currently rejected under 35 U.S.C. 101 (*and claim 33 further objected to as being dependent upon a canceled claim*), but would be allowable if rewritten to overcome these objections/rejections.

8. The following is a statement of reasons for the indication of allowable subject matter:

With respect to **Claims 4 and 12**, the prior art of record fails to explicitly teach or fairly suggest a method for speaker adaptation that utilizes estimated weights based on misrecognized speech utterances as respectively recited in claims 4 and 12, wherein the estimated weights are calculated by computing an average likelihood difference per frame and then computing a weight value by averaging the average likelihood difference over error words (*specification, page 6*).

Although Barnard et al (*U.S. Patent: 7,216,079*) discloses that it is well known in the prior art to mark and weight misrecognized utterance sections for speaker training (*Col. 3, Line 64- Col. 4, Line 11; Col. 5, Lines 16-26; Col. 6, Lines 21-39; and Col. 9, Lines 47-67; and Fig. 3*) and Junqua (*U.S. Patent: 6,253,181*) teaches an equation for calculating an average likelihood difference, as applied to claim 5, Junqua does not teach averaging the average likelihood difference over all error words to determine a weight for speaker adaptation of a speech recognition model. Thus, claims 4 and 12 are allowable over the prior art of record.

With respect to **Claims 6 and 14**, the prior art of record fails to explicitly teach or fairly suggest a method for speaker adaptation that utilizes estimated weights based on misrecognized speech utterances, wherein the estimated weights are calculated by multiplying an average likelihood difference per frame calculated using the equation recited in claims 6 and 14 by the inverse of a number of misrecognized words for a particular speaker as per the equation also recited in these claims.

Although Barnard et al (*U.S. Patent: 7,216,079*) discloses that it is well known in the prior art to mark and weight misrecognized utterance sections for speaker training (*Col. 3, Line*

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64- Col. 4, Line 11; Col. 5, Lines 16-26; Col. 6, Lines 21-39; and Col. 9, Lines 47-67; and Fig.

3) and Junqua (*U.S. Patent: 6,253,181*) teaches an equation for calculating an average likelihood difference, Junqua does not teach multiplying the calculated average likelihood by the inverse of a number of misrecognized words for a particular speaker as per the equation recited in claims 6 and 14.

The dependent claims associated with the preceding claims further limit claims containing potentially allowable subject matter, and thus, are also contain potential allowable subject matter.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/James S. Wozniak/  
Primary Examiner, Art Unit 2626